

CLAIMS

1. A method of transferring information in units over a wireless digital communications link between a transmitting station and a receiving station
5 comprising the steps of:

transmitting first information units at a first power level;
monitoring if correct reception of the transmitted units occurred;
and

transmitting second information units associated with the first information
10 units, for which first information units the monitoring did not indicate correct reception occurred, at a second power level which is controlled on the basis of the disparity between target and actual quality of reception parameters for said second information units, wherein the target quality of reception parameter for said second information units is different to the target quality of reception
15 parameter for said first information units, the second information units allowing the content of the first information units to be established.

2. The method of claim 1 wherein the target quality of reception parameter for the second information units is greater than the target quality of
20 reception parameter for the first information units.

3. The method of claim 1, wherein the first information unit quality of reception parameter is chosen on the basis of a target bit error rate or block error rate in the information received at the receiving station by virtue of first
25 information units.

4. The method of claim 1, wherein the quality of reception parameter is the signal to interference (SIR) ratio.

30 5. The method of with claim 1, and further comprising the step of analysing the disparity between the actual and target quality of reception parameters of received information unit transmissions and decreasing the

information unit transmission power level if the quality of reception parameter for received information unit transmissions is greater than the target quality of reception parameter, otherwise increasing the information unit transmission power level if the quality of reception parameter for received information unit transmissions is less than the target quality of reception parameter.

6. The method of claim 1 wherein the communications link is established by equipment operating in accordance with a communications protocol based on the Universal Mobile Telecommunication System.

7. The method of claim 6 wherein the communications link is established on at least one physical channel.

8. The method of claim 7 wherein the receiving station sends transmission power regulation commands to the transmitting station in the transmit power control (TPC) field carried on a control channel set up in the communications link.

9. The method of claim 1, wherein the target quality of reception parameter for first information units is selected to correspond to a defined probability of failed first information units transmission and consequent second information units transmission.

10. The method of Claim 1 and further comprising the step of selecting the first power level to control the average power consumption of the transmitter in order to maintain a minimum average power consumption taking into account the first power level and the second power level for the consequent probability of transmission of second information units.

11. The method of claim 1 wherein the second information unit transmissions are performed using an initial transmission power boost without reference to the quality of reception parameter.

12. A digital wireless communications system comprising at least one transmitter having means for transmitting first information units at a first power level;

5 at least one receiver having means for receiving the transmitted information units;

control means for controlling the transmitter output power; and

monitoring means for monitoring if correct reception of the transmitted units occurred at the receiver,

10 wherein the transmitting means transmits second information units associated with the first information units for which first information units the monitoring means does not indicate correct reception has occurred, the second information units being transmitted at a second power level which is controlled on the basis of the disparity between target and actual quality of reception parameters for said second information units, wherein the target quality of
15 reception parameter for said second information units is different to the target quality of reception parameter for said first information units, the second information units allowing the content of the first information units to be established.

20 13. The communications system of claim 12 wherein the target quality of reception parameter for the second information units is greater than the target quality of reception parameter for the first information units.

25 14. The communications system of claim 12 wherein the control means selects the first power level to control the average power consumption of the transmitter in order to maintain a minimum average power consumption taking into account the first power level and the second power level for the consequent probability of transmission of second information units.

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15. The communications system of claim 12 wherein the second information unit transmissions are performed using an initial transmission power boost without reference to the quality of reception parameter.

5 16. A transmitter station for digital wireless transmission of traffic information to a receiver, said transmitter station having:

a transmitter for transmitting first information units at a first power level;
control means for controlling the transmitter output power; and
monitoring means for monitoring if correct reception of the transmitted

10 units occurred at the receiver,

wherein the transmitter transmits second information units associated with the first information units for which first information units the monitoring means does not indicate correct reception has occurred, at a second power level which is controlled on the basis of the disparity between target and actual quality of
15 reception parameters for said second information units, wherein the target quality of reception parameter for said second information units is different to the target quality of reception parameter for said first information units, the second information units allowing the content of the first information units to be established.

20 17. The transmitter station of claim 16 wherein the target quality of reception parameter for the second information units is greater than the target quality of reception parameter for the first information units.

25 18. The transmitter station of claim 16 wherein the control means selects the first power level to control the average power consumption of the transmitter in order to maintain a minimum average power consumption taking into account the first power level and the second power level for the consequent probability of transmission of second information units.

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19. The transmitter station of claim 16 wherein the second information unit transmissions are performed using an initial transmission power boost without reference to the quality of reception parameter.

5 20. A receiver for use in a digital wireless communications system comprising at least one transmitter having means for transmitting first information units at a first power level, the receiver having means for receiving the transmitted information units;

control means for controlling the transmitter output power; and

10 monitoring means for monitoring if correct reception of the transmitted units occurred at the receiver,

wherein the transmitting means transmits second information units associated with the first information units for which first information units the monitoring means does not indicate correct reception has occurred, the second
15 information units being transmitted at a second power level which is controlled on the basis of the disparity between target and actual quality of reception parameters for said second information units, wherein the target quality of reception parameter for said second information units is different to the target quality of reception parameter for said first information units, the second
20 information units allowing the content of the first information units to be established.